DOCUMENT RESUME

ED 431 173 CS 013 592

TITLE A Study of the Instructional Effectiveness of the HARCOURT READING Program. HARCOURT READING Technical Report #2.

INSTITUTION Indiana Univ., Bloomington. Center for Innovation in Assessment.; American Conference of Academic Deans, Washington, DC.

PUB DATE 1999-05-00

NOTE 7p.

PUB TYPE Reports - Research (143)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Curriculum Research; Elementary Education; Grade 1; Grade 4; *Instructional Effectiveness; Pilot Projects; Pretests Posttests; Program Evaluation; *Reading Instruction; *Reading Programs; *Reading Skills; *Student Attitudes

ABSTRACT

A series of pilot studies was conducted to evaluate the instructional effectiveness of the Harcourt Reading Program. One of the studies was conducted in the fall of 1998-99 by Indiana University, and data were analyzed by them also. Harcourt School Publishers sought out teachers to participate. Teachers from New Jersey, New York, Ohio, and Pennsylvania volunteered, 14 at grade 1 and 12 at grade 4. The following research questions guided the design, procedures, and data analysis: Is Harcourt Reading instructionally effective? and Does Harcourt Reading have a positive impact on students' attitudes and interests? A quasi-experimental pretest-posttest design was used. Following the pretests, the teachers taught selected themes using the resources and procedures contained in Harcourt Reading. Table 1 summarizes the skills taught in the themes piloted by the teachers in the study and indicates that the pilot study included a broad sample of reading skills from the strands of decoding, vocabulary, comprehension, literary appreciation, and study skills. Tables 2, 3, and 4 show that students realized gains in reading scores after using the program. Findings suggest that Harcourt Reading is instructionally effective, and this appears to hold up across grade levels. Contains 4 tables of data. (NKA)

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ED 431 173

HARCOURT READING
Technical Report #2

A Study of the Instructional Effectiveness of the *HARCOURT READING* Program

Prepared by

The Center for Innovation in Assessment
Indiana University

and

Department of Test Services
Harcourt Brace School Publishers

HARCOURT® BRACE

May 1999

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A Study of the Instructional Effectiveness of the *HARCOURT READING* Program

This report describes one of a series of pilot studies that were conducted to evaluate the instructional effectiveness of the *HARCOURT READING* program.

Background Information

Harcourt School Publishers asked the Center for Innovation in Assessment at Indiana University to conduct a series of independent pilot studies to evaluate the effectiveness of *HARCOURT READING*. Harcourt School Publishers sought out volunteer teachers to participate in the study; the Department of Test Services assisted in designing, securing, and scoring the data collection instruments; and Indiana University conducted the study and analyzed the data that were collected. The study described in this report was conducted in the fall of the 1998-99 school year.

Research Questions

The following research questions guided the design, procedures, and data analysis of the pilot study:

> *Is HARCOURT READING instructionally effective? Do selected themes significantly increase students' understanding of key reading skills, concepts, and strategies as measured by a program Skills Test? As measured by a standardized achievement test?*
>
> *Does HARCOURT READING have a positive impact on students' attitudes and interests? Do selected themes significantly increase students' attitudes toward reading as measured by an informal survey?*

Design and Procedures of the Study

Because of cost and time considerations, the study was limited to two grades – grades 1, and 4. It was believed that these two grades would give a good cross-sectional look at the primary and upper elementary levels of the program.

Teachers who volunteered to participate in the study had not used the program previously. The teachers were allowed to select one theme to pilot over a four- to six-week period. They also agreed to administer data collection instruments before beginning instruction and again after completing instruction.

A total of 26 teachers volunteered to participate in the study: 14 at grade 1, and 12 at grade 4. The participating teachers came from four states: New Jersey, New York, Ohio, and Pennsylvania.

A quasi-experimental pretest-posttest design was used. Before instruction began, students were administered the following pretests: (1) the appropriate *HARCOURT READING* Skills Test; (2) the reading section of the *Stanford 9 Achievement Test, Ninth Edition* (Abbreviated Battery); and (3) and the *Elementary Reading Attitude Survey*, an informal instrument designed to measure attitudes toward reading.

Following the pretests, the teachers taught the selected themes using the resources and procedures contained in *HARCOURT READING*. Teachers also received training from experienced consultants in methods of implementing and using the program. Instructional time varied from four to six weeks depending on the themes taught. In most cases, *HARCOURT READING* replaced the existing reading program.

Upon completion of the theme, students were administered the same three instruments as posttests. All data collection instruments were returned to Indiana University where they were processed. The *Stanford 9 Achievement Tests* were scored at the Harcourt Brace Educational Measurement Scoring Center. The *HARCOURT READING* Skills Tests and the *Elementary Reading Attitude Surveys* were scored at Indiana University, and all of the data were analyzed at Indiana University.

Table 1 summarizes the skills taught in the themes that were piloted by teachers in the study. As Table 1 indicates, the pilot study included a broad sample of reading skills from the strands of decoding, vocabulary, comprehension, literary appreciation, and study skills.

TABLE 1
Content of the *HARCOURT READING'* Themes
Taught by the Pilot Teachers

Theme	Grade 1	Grade 4
1	*Vocabulary* •Key Words *Decoding* Initial consonants	*Vocabulary* Key Words *Comprehension* Make Predictions Draw Conclusions
2	*Vocabulary* Key Words *Decoding* Short vowels; final consonants Structural analysis; inflected words	*Vocabulary* Key Words *Decoding* Structural analysis: prefixes, suffixes, roots *Literary Appreciation* Narrative elements
4	*Vocabulary* Key Words *Decoding* Short vowels/long vowels Structural analysis: inflected forms *Comprehension* Make predictions *Study Skills* Alphabetical order	*Vocabulary* Key Words Context clues *Comprehension* Cause and effect Main idea/details Sequence

Findings

Table 2 summarizes the pre- and posttest means and standard deviations for the Skills Test, the Stanford 9, and the *Elementary Reading Attitude Survey* for both grades. The means and standard deviations for the Skills Tests and the *Elementary Reading Attitude Survey* are presented in percentages; those for the Stanford 9 are in raw scores.

TABLE 2
Means and Standard Deviations of
Pretests and Posttests

Grade	Skills Test		Stanford 9 Total Reading		Attitude Survey	
Grade 1 (N=132)	Mean	SD	Mean	SD	Mean	SD
Pretest	64.9	21.1	84.2	16.9	83.3	10.0
Posttest	85.0	16.1	95.8	13.4	84.1	9.4
Grade 4 (N=126)						
Pretest	69.9	16.1	35.7	5.3	77.1	9.9
Posttest	85.3	10.7	38.1	5.8	77.3	12.1

At grade 1, the mean Skills Test score increased from 64.9% before instruction to 85.0% after instruction. This increase was highly significant ($t=15.021$; $p<.0001$). Likewise, the raw score means for Total Reading on the Stanford 9 increased from 84.2 to 95.8. This gain was also significant ($t=13.485$; $p<.0001$). The raw score means from the Stanford 9 were converted to scale scores, percentiles, and grade equivalents in order to interpret the increase in normative scores. The mean scale score increased from 492 to 521; the percentile scores for the means increased from 69 to 84; and the grade equivalent scores for the means increased from 1.3 to 1.7. The mean score on the Attitude Survey increased from 83.3% to 84.1% percent. Although positive, this increase was not significant ($t=.898$; $p<.371$).

At grade 4, the mean Skills Test score increased from 69.9% to 85.3%, a statistically significant gain ($t=12.921$; $p<.0001$). The Total Reading raw score mean on the Stanford 9 increased from 35.7 to 38.1. This increase was also significant ($t=5.189$; $p<.0001$). When interpreted in terms of normative scores, the scale score went from 627 to 636, the percentile score from 76 to 80, and the grade equivalent score from 4.3 to 4.7. The mean score for the Attitude Survey increased slightly from 77.1% to 77.3%. This increase was not significant ($t=.327$; $p<.744$).

Because both groups showed a significant gain in the Stanford 9 Total Reading score, an additional analysis was conducted to see which subtests may have contributed to those gains. Table 3 shows the pre- and posttest subtest means and standard deviations for the Stanford 9 for grade 1.

TABLE 3
Means and Standard Deviations of the
Stanford 9 Subtests for Grade 1

Test	Word Study Skills		Word Reading		Reading Comprehension	
	Mean	SD	Mean	SD	Mean	SD
Pretest	33.5	5.6	32.1	6.3	19.6	7.6
Posttest	36.0	4.8	35.5	4.6	24.7	5.6

As Table 3 shows, mean scores increased for all three subtests. The increases for Word Study Skills ($t=8.276$; $p<.0001$), for Word Reading ($t=10.208$; $p<.0001$), and for Reading Comprehension ($t=12.68$; $p<.0001$) were all highly significant.

A similar analysis was conducted for grade 4. At grade 4, the Stanford 9 yields two subtest scores – Vocabulary and Reading Comprehension. Table 4 presents the pre- and posttest means and standard deviations for these subtests.

TABLE 4
Means and Standard Deviations of the Stanford 9 Subtests for Grade 4

Test	Vocabulary		Reading Comprehension	
	Mean	SD	Mean	SD
Pretest	15.5	2.0	20.2	4.1
Posttest	16.4	2.1	21.7	4.4

As in grade 1, mean scores increased on each of the subtests. The increase in Vocabulary ($t=4.476$; $p<.0001$) and the increase in Reading Comprehension ($t=3.808$; $p<.0001$) were both highly significant.

Conclusions

The following conclusions can be made based on the findings:

- *HARCOURT READING* is instructionally effective. Students using *HARCOURT READING* increase their understanding of key reading skills, concepts, and strategies.

- The instructional effectiveness of *HARCOURT READING* appears to hold up across grade levels. In this study, students in grades 1 and 4 made significant gains in reading achievement after completing one theme.

- The instructional effectiveness of *HARCOURT READING* also appears to demonstrate itself on both criterion-referenced measures related to the program as well as standardized achievement tests that are independent of the program.

- At grade 1, the average increase on the Stanford 9 was approximately 15 percentile points after completing instruction in only one theme, with significant gains made in Word Study Skills, Word Reading, and Reading Comprehension.

- At grade 4, the average increase on the Stanford 9 was about 4 percentile points after completing instruction in only one theme, with significant gains made in Vocabulary and Reading Comprehension.

- There were also increases in student attitudes toward reading at both grades 1 and 4, but the increases were not statistically significant. It is likely that attitudes and interests toward reading are formed over a longer period of time, and not as sensitive to short-term changes in instruction.